The different types of kneading rotors 14 - 16, shown in Figs. 3A to 3C, were prepared in which the diameter was set to 58 mm, the lower tip clearance provided by each of the taller tip portions 14b - 16b was set to 0.5 mm, and the greater tip clearance provided by each of the lower tip portions 14c - 16c was set to 3 mm. The kneading blades 14a - 16a of the kneading rotors 14 - 16 were set such that the forward type has a twist angle of 300 with respect to the axial direction, the neutral type has a twist angle of 0° with respect to the axial direction and the backward type has a twist angle of 30° with respect to the axial direction.

Then, the rotor segment 12 having a segment length of 50 mm was fabricated by arranging the three types of kneading rotors 14 - 16 in the order of the forward type, the neutral type, the forward type, the neutral type, and the backward type in the flowing direction, as shown in Fig. 5.

IN THE CLAIMS

1. (Amended) A screw set in a twin-screw extruder for mixing and dispersing a material to be kneaded into a kneaded product having a desired state of kneading, each said screw set comprising.

a rotor segment comprising at least one kneading rotor, said kneading rotor having a plurality of kneading blades which provide a plurality of tip clearances different from each other at least in the circumferential direction, said kneading rotor having a constant sectional shape in the axial direction, except for crest portions of said kneading blades; and

a screw segment comprising at least one screw blade, said screw segment, except for crest portions of the screw blades thereof, having the same sectional shape as said rotor segment, except for the crest portions of said kneading blades.